

by Yvonne Gentzler, Ph.D Liz Romero, Ph.D.



Goodheart-Willcox Co., Inc. Tinley Park, Illinois

# Topic 12-3 Nutritional Need Changes

- In this topic, you will study the nutritional need changes of people in different stages of life, as well as
  - \* Needs of pregnant women and infants
  - Needs of children and teens
  - **Sports nutrition**
  - Needs of adults
  - \* Nutrition needs of people who are ill

# **Nutritional Need Changes**

#### **Objectives for Topic 12-3**

After studying this topic, you will be able to

- identify dietary needs of people in different stages of life
- describe special nutrient needs of athletes
- explain how some diseases can be related to diet

# Topic 12-3 Terms

- vegetarian diet
- dehydration
- food allergies
- food intolerance
- lactose intolerance

# Needs of Pregnant Women and Infants

Pregnant women must eat food that will supply nutrients for their unborn babies

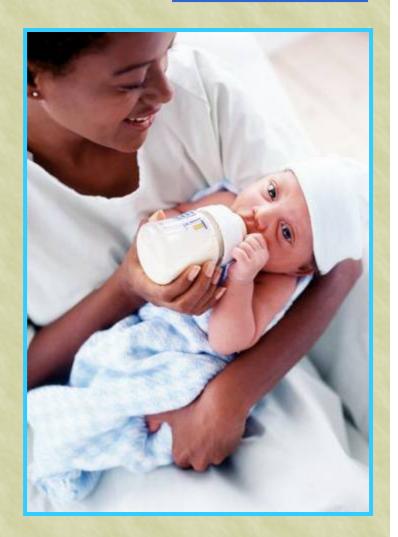


#### **Nutrition Before Birth**

- An unborn child gets nutrients through the mother
- Pregnant women need to make few dietary changes during pregnancy
  - Two to three servings from the milk group
  - \* Two added servings from grain group
  - One extra serving of both fruits and vegetables

# Nutrition in Infancy

- Sets a foundation for life
  - Breast milk or formula meets all early nutrient needs
  - Juice can be given for vitamin C after six months of age
  - Cereal can be introduced at about four months of age; other solid foods are introduced gradually



## Needs of Children and Teens

- As children grow, their
  - nutritional needs change
  - food preferences change

# Nutrition During the Preschool Years

- Children need larger proportion of nutrients than adults to support growth
- Snacks are an important supplement to meals
- Adults should encourage good nutrition



# Nutrition During the Early School Years



- Nutritious breakfasts are important for students
- Good nutrition and eating habits should be encouraged in the cafeteria

# Nutrition During the Teen Years

- Teens often
  - skip meals due to busy schedules
  - select snacks that are high in fat and sugars
- Teens need nutrients for
  - growth and maintenance
  - meeting energy needs



# Special Needs of Vegetarians

- A *vegetarian diet* is a pattern of eating that is made up largely or entirely of foods from plant sources
  - \* Vegans consume no foods of animal origin
  - \* Lacto vegetarians consume no food of animal origin except dairy products
  - \* Ovo vegetarians consume no food of animal orign except eggs
  - \* Lacto-ovo vegetarians consume no food of animal origin except eggs and dairy products

# **Sports Nutrition**

- Athletes should follow the same dietary guidelines suggested for healthy people, plus
  - increase daily calorie intake
  - eat plenty of iron-rich foods
  - meet daily calcium needs
  - drink plenty of fluids

## **Increase Daily Calorie Intake**

- Athletes need extra calories to fuel high levels of activity
- For best performance, calories should come from
  - complex carbohydrates (65–75%)
  - \* fat (20–25%)
  - ❖ protein (5–10%)
- Eating a small meal 3–4 hours before a workout or competition will provide needed energy

# Drink Plenty of Fluids

- Athletes lose a lot of water through sweating
  - Drinking fluids during activity helps prevent dehydration, or an abnormal loss of body fluids



## Eat Plenty of Iron-Rich Foods

- Iron helps the blood carry needed oxygen to muscles during physical activity
- Good sources of iron are
  - lean meats
  - leafy green vegetables
  - enriched whole grain bread

## Meet Daily Calcium Needs

- Calcium helps build strong bones that are more resistant to stress fractures
  - \* It is especially important for female athletes to meet the daily calcium requirements
- Good sources of calcium are
  - dairy products
  - leafy green vegetables

## Supplements

- Anabolic steroids are powerful but dangerous drugs taken to boost athletic performance
- Steroids should not be used because they can cause
  - high blood pressure
  - heart disease
  - liver damage
  - stunted growth in adolescents

### Needs of Adults



- Adults need fewer calories because their
  - bodies have reached physical maturity
  - metabolism slows
- Need for nutrients does not lessen

#### Nutrition for Older Adults

- Fewer calories needed for less activity
- Nutrient needs remain about the same
- Increased need for calcium
- Physical changes may cause a need for
  - \* softer, easier-to-chew foods
  - mild foods

# Nutrition Needs of People Who Are Ill

- Depending on the illness, people who are sick may need
  - \* more water to replace lost fluids
  - \* more protein
  - more vitamins and minerals
  - limited sugar intakes
  - \* a medical diet

# Food Allergies

- Food allergies are abnormal reactions of a body's immune system to a particular food
  - Symptoms usually come on quickly and can range from nausea to rashes, shortness of breath, or even death
- Milk, eggs, wheat, and corn are some of the most common foods causing allergic reactions

#### Did You Know...



To avoid inhalation or a skin contact reaction, people with severe peanut allergies are advised not to fly on airlines that serve peanut snacks

Source: The Food Allergy and Anaphylaxis Network

#### **Food Intolerances**

- Food intolerance is an adverse reaction to the consumption of certain foods
  - Symptoms appear slowly and include upset stomach, minor headaches, and loss of sleep
- Lactose intolerance is a form of food intolerance in which the body is unable to digest dairy products that contain lactose

## High Blood Pressure

- **Blood pressure** is the force of blood pushing against the walls of the arteries
- High blood pressure can cause arteries to harden, leading to a a heart attack or stroke
  - Weight loss, physical activity, and a healthful diet can help prevent and control high blood pressure

### Diabetes

- If a person has diabetes, the body's production of insulin is limited, or body cells do not respond properly to insulin
- People with diabetes must
  - monitor their blood glucose level
  - control their sugar intake
  - \* control their weight and exercise regularly
  - \* receive insulin, if needed

# Osteoporosis

- Osteoporosis is a disease that weakens bones, often causing severe fractures
  - It is caused by calcium depletion
  - It primarily affects people over age 50, mostly women
- A diet rich in calcium and vitamin D can slow bone loss

#### Cancer

- Cancer is a disease in which abnormal cells divide uncontrollably and invade other body tissues
- To help reduce your risk, the American Cancer Society recommends
  - eating a healthy diet
  - \* using alcohol in moderation, or not at all
  - staying active and maintaining a healthy weight

# Summary for Topic 12-3

- Dietary needs vary at different stages of life
- During childhood and teen years, people have increased needs for some nutrients to support rapid growth
- As people reach adulthood, their need for nutrients remains high, but their calorie needs decrease
- People who are ill usually have additional nutrient needs